SCIENTIFIC NOTE

Additional prey records for the forest-dwelling spider wasp, *Priocnemis oregona* (Hymenoptera:Pompilidae).—The range of spiders used by *P.* (*Priocnemissus*) *oregona* Banks is of interest because this wasp, while widespread on the Pacific Coast, generally lives in mesic, forested habitats. As a result its activities take place mainly on shaded ground covered by leaf litter and have rarely been observed. Until comparatively recently nothing was known of the nesting behavior, but three species of prey, all primitive burrowing spiders, *Actinoxia versicolor* Simon (Ctenizidae), *Atypoides riversi* P. -Cambridge (Antrodiaetidae), and *Brachythele* sp. (Dipluridae), were recorded by Hurd and Wasbauer (1956, J. Kans. Entomol. Soc., 29: 169) and Wasbaucr and Powell (1962, *ibid.*, 35:394). We speculated then that a wider taxonomic spectrum of spiders might be expected for *P. oregona* because the closely related *P.* (*Priocnemissus*) *minorata* Banks of eastern North America and European species of *Priocnemis* use a variety of wandering ground spiders. However, in recent years additional captures of the same kind of prey previously associated with *P. oregona* tend to confirm the possibility that this pompilid displays restricted hunting behavior, specializing on burrowing Orthognatha.

On two occasions field course groups from the Department of Entomology, University of California, Berkeley, have discovered prey associated with *P. oregona* (female wasps identified by M. S. Wasbauer, California State Department of Agriculture, Sacramento). The habitat in both instances was quite similar: a partially open area in mixed forest of *Lithocarpus*, *Arbutus*, *Ceanothus*, *Pseudotsuga*, and *Sequoia*, marginal to more dense redwoods and a few meters above a creek. The first was near Alpine Dam, Marin County, where on 10 April 1968, H. V. Daly, members of the Immature Insects class, and I found a female *P. oregona* with a paralyzed, mature female of *Antrodiaetus pacificus* (Simon) adjacent to a burrow entrance which was located on a rocky, north-facing, shaded slope. The second discovery occurred quite fortuitously, on 24 April 1970, at Bates Creek, about three miles NNE of Soquel, Santa Cruz County, when E. I. Schlinger and members of the Field Entomology class were excavating trapdoor spider nests at night. A female *P. oregona* was unearthed several cm deep within a burrow, along with a paralyzed spider, a female of *Actinoxia versicolor*. The burrow entered a nearly vertical roadbed bank which had many nests of orthognathous spiders. M. M. Bentzien, who identified both prey spiders and assisted us with the excavation at Bates Creck, suggested that in all probability the burrow was that of this or a similar spider.

Thus, there are conflicting possibilities as to whether *P. oregona* digs her burrow or appropriates that of the spider. Moreover, it is unknown if the prey is usually stung within its own nest or is enticed or dragged from the tunnel, but these spiders are nocturnal and do not normally wander from the nest even at night. If the wasp digs her own burrows and cells, the question remains as to whether the nest consists of one or more cells, but the chance of discovery of a pompilid and its prey in a single cell burrow is highly improbable. In New York, *Priocnemis minorata*, which uses wandering ground spiders (not Orthognatha), constructs a nest with up to seven sequentially provisioned cells (Yoshimoto, 1954, Bull. Brooklyn Entomol. Soc., 49: 130). Although tunnel digging was not observed by Yoshimoto and abandoned holes could be appropriated by *P. minorata*, use of

primitive spiders and their burrows would be a remarkably divergent adaptation by *P. oregona.*

Multi-cellular nests have been described only for the genus *Priocnemis* among North American Pompilidae, and use of abandoned arthropod or vertebrate burrows is known for this and related genera in Europe and South America (Yoshimoto, *ibid.*: 138). On the basis of the description of the unnamed wasp, the locality (Brookdale, Santa Cruz County), and the season (April), the curious account by F. A. Leach (1921, *Wild Life in California*, Tribune Publ. Co., Oakland.: 99) appears to refer to *P. oregona.* In this case the wasp provisioned a "bulky" spider about twice her own size in a burrow located about 18 inches up from the base of a nearly vertical, root-choked roadbed bank. The wasp did not fill the tunnel following deposition of the spider (at 3:15 p.m.), and then continued to occupy the burrow over a five day period of inclement weather. This tends to support the suggestion that sequential cell occupancy of the nest is practiced by *Priocnemis oregona* in a manner similar to its eastern congener.—J. A. POWELL, *University of California, Berkeley, 94720.*

SCIENTIFIC NOTE

Synonymy of the pselaphid beetles *Actium retractum* and *A. hatchi* (Coleoptera:Pselapidae).—In our revision of *Actium* Casey and *Actiastes* Casey (1971, Univ. Calif. Publ. Entomol., vol. 67) we indicated that *Actium retractum* Casey was probably the same species as *A. hatchi* Park and Wagner but were unable to locate the type specimen of *A. hatchi.* Dr. H. S. Dybas, Field Museum of Natural History, located the specimen and kindly brought it to our attention. Examination of this type confirmed the suspected synonymy.

Actium retractum Casey, 1908. Can. Entomol., 40(8): 270. Holotype ♂, Queen Charlotte Islands, Canada (U. S. National Museum—38643).

Actium hatchi Park and Wagner, 1961. Univ. Wash. Publ. Biol., 16: 20. Holotype ♂, Snoqualmie Pass, Washington, U.S.A. (Field Museum of Natural History, Chicago). NEW SYNONYMY—ALBERT A. GRIGARICK AND ROBERT O. SCHUSTER. *University of California, Davis, 95616.*

SCIENTIFIC NOTE

New Synonymy in the genus *Meloe* (Coleoptera:Meloidae).—In their recent revision of the North American species of *Meloe*, Pinto and Selander (1970, Illinois Biol. Monogr., No. 42) tentatively treated *Meloe* (*Meloe*) *quadricollis* Van Dyke as a distinct species. They recognized that individuals associated with this name were almost identical to those of *M. californicus* Van Dyke, differing but slightly in coloration and minor details of pronotal punctation. However, only three